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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/705,208	MCBRIDE ET AL.	
	Examiner	Art Unit	
	Benjamin Buss	2129	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 February 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,5,6,8-10,13-15,22-35,40 and 41* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,5,6,8-10,13-15,22-35,40 and 41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in response to an AMENDMENT entered 2/21/2007 for the patent application 10/705,208 filed on 11/10/2003. The Office Actions of 10/16/2006 and 4/20/2006 are fully incorporated into this Office Action by reference. Claims 1, 5-6, 8-10, 13-15, 22-35, & 40-41 are pending.

In the event that Applicant chooses to amend, the Examiner suggests clearly defining the following broad terms in the claims:

natural language	**response layer**	**linked**
input layer	**recognized**	**tag**
instruction	**code**	

Claim Objections

Claims 1, 35, & 41 are objected to because of the following informalities:

- Claims 1, 35, & 41: And the end of the claim, change "the response layer or the logic layer, respectively" to -- the response layer or the logic layer, as called for by the signifier --.

Appropriate correction is required.

Response to Arguments

Applicant's arguments, see page 10, filed 2/21/2007, with respect to the duplicate have been fully considered and are persuasive. Claims 18-20 have been canceled, so the objection to claims 18-20 has been withdrawn.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 6, & 35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claims 1, 6, & 35: In the newly added limitation, the meaning of the phrase "wherein the logic layer is configured to choose between various responses provided by the user" is not clear. As understood by the examiner, the user submits a request and awaits a response. Unless the user request necessarily

includes the possible answers, the referenced phrase does not make sense in context. (For example, "Which of the following is the capital of France: London, Tokyo, Paris, or Oslo?" would include various responses provided by the user, but "What is the capital of France?" would NOT.) The examiner suggests that applicant intended the phrase to read either -- wherein the logic layer is configured to choose between various responses to be provided to the user -- OR -- wherein the logic layer is configured to choose between various responses provided in the information received into the template from the administrator --.

Appropriate corrections are required.

Response to Arguments

Applicants' arguments, see page 10, filed 2/21/2007, with respect to the rejection of claims 1 & 35 under 35 U.S.C. §112, second paragraph, have been fully considered and are persuasive. The rejection of claims 1 & 35 under 35 U.S.C. §112, second paragraph, have been withdrawn. The claim amendments have raised a new rejection of claims 1, 6, & 35 under 35 U.S.C. §112, second paragraph.

Claim Rejections - 35 USC §§ 102 / 103

Response to Arguments, re: Non-Analogous Art

In re pages 11-12, Applicant argues that "Of course, management and retrieval of information is inherent in all computer related prior art", but that "the field of endeavor of the Chikirivao publication should be limited to NLP whereas the field of endeavor of the Ferrel patent should be limited to multimedia publishing".

Examiner disagrees. The claims are not limited to Natural Language Processing and the field of the invention according to the specification is "use of virtual robots ("Bots") to autonomously process requests."

It seems that Applicant wants to work in the field of "autonomously processing requests" while restricting all prior art to narrower fields. This argument is not persuasive.

Response to Arguments, re: Claim Limitations

Applicant's arguments with respect to claims 1, 5-6, 8-10, 13-15, 22-35, and 40-41 have been considered but are moot in view of the new ground(s) of rejection. See below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 5-6, 8-10, 13-15, 23-24, 27-35, and 40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chikirivao** (USPAP 2003/0163783) and **Androutsopoulos** ("Natural Language Interfaces to Databases – An Introduction").

Independent Claim 1:

Chikirivao teaches:

- Providing a template interface to the administrator, wherein the template includes at least one field to elicit information from the administrator (pages 1-7 especially "querying the administrator ... create a customized rule based upon a pre-existing customizable rule template saved in the rule repository" ¶38-39),
- Receiving information from the administrator into the template (pages 1-7 especially "querying the administrator ... create a customized rule based upon a pre-existing customizable rule template saved in the rule repository" ¶38-39 and "entering and saving of data into a template" ¶43), and
- Making the information accessible to a rules-based program for use in providing the at least one response in reply to a request from a user (pages 1-7 especially "querying the administrator ... create a customized rule based upon a pre-existing customizable rule template saved in the rule repository ... either testing the rule or saving the rule" ¶38-39 and "rules created by an administrator are preferably saved in the rule repository" ¶29), wherein the step of making the information accessible to the rules-based program saves the information as part of the template into rules (pages 1-7 especially "querying the administrator ... create a customized rule based upon a pre-existing customizable rule template saved in the rule repository" ¶38-39 and "entering and saving of data into a template" ¶43 and "querying the administrator ... create a customized rule based upon a pre-existing customizable rule template saved in the rule repository ... either testing the rule or saving the rule" ¶38-39 and "rules created by an administrator are

preferably saved in the rule repository" ¶29 and "querying the administrator ... create a customized rule based upon a pre-existing customizable rule template saved in the rule repository ... either testing the rule or saving the rule" ¶38-39 and "rules created by an administrator are preferably saved in the rule repository" ¶29; *The rule repository is clearly structured data storage*), and wherein the step of saving the information into rules includes the steps of:

- Retrieving rules (pages 1-7 especially "system obtains the rule" ¶38-39),
- For each rule retrieved, determining whether the rule needs information (pages 1-7 especially "administrator may need to specify more or less information" ¶40 and "rules which are generated based upon ... information ... based upon parameters specified" ¶31 and "information and/or sub-rules needed to make such determinations" ¶32 and "rules may be designed with any level of interactivity and/or user knowledge required and may include and utilize data and other information" ¶33 and "extracts from the provided information those parameters required by the rule(s)" ¶44-48),
- If the rule needs information, retrieving the information from a corresponding field in the template and inserting the information into the rule (pages 1-7 especially "extracts from the provided information those parameters required by the rule(s)" ¶44-48 and "administrator may need to specify more or less information" ¶40 and "routing of information based upon the input template" ¶59),
- wherein the step of determining whether the rule needs information includes determining whether either a response layer or a logic layer needs information (pages 1-7 especially "rule which requires the user to provide inputs as to specific needs" ¶35 and "administrator may need to specify more or less information" ¶40 and "rules which are generated based upon ... information ... based upon parameters specified" ¶31 and "information and/or sub-rules needed to make such determinations" ¶32 and "rules may be designed with any level of interactivity and/or user knowledge required and may include and utilize data and other information" ¶33 and "extracts from the provided information those parameters required by the rule(s)" ¶44-48), and
    - retrieving information indicated as needed from a corresponding field in the template and inserting the information into the response layer or logic layer, respectively (pages 1-7

especially "templates and other features that enable a user to expeditiously enter the necessary information required" ¶43 and "extracts from the provided information those parameters required by the rule(s)" ¶44-48 and "information is received from the field" ¶50 and "routing of information based upon the input template" ¶59 and "administrator may need to specify more or less information" ¶40);

Chikirivao fails to teach:

- Wherein the step of determining whether a layer needs information, includes the step of identifying a signifier in the layer,
    - wherein the signifier is an identifier configured to call for information such that the call for information invokes a process to select in the information from a corresponding field in the template so that the information will be linked to the rule, and
    - wherein the logic layer is configured to choose between various responses provided by the user,
    - wherein at least one of the responses is recognized by the logic layer,
    - wherein the chosen response is the response to be used in the response layer.

Androutsopoulos teaches:

- Wherein the step of determining whether a layer needs information includes the step of identifying a signifier in the layer, wherein the signifier is an identifier configured to call for information such that the call for information invokes a process to select in the information from a corresponding field in the template so that the information will be linked to the rule (p1-50 especially "form-based interface" §3 and "linguistic problems" §4 and "Pronouns ... anaphora" §4.5 and "elliptical sentences" §4.6 and "database tuples may contain encoded information" §5.5; *It would have been clear to the person of ordinary skill in the art at the time the invention was made that the reference teaches that there are indicators in the user input which indicate when more information is needed in order to process the request, and that the encoded information would be treated as embedded instruction code signaling that the full information would need to be retrieved for the response layer*), and
    - wherein the logic layer is configured to choose between various responses provided by the user (p1-50 especially "keep a list of all entities mentioned in the discourse. When a pronoun is

encountered, the system examines the list ... satisfies grammatic and semantic constraints" §4.5 and "contextual substitution" §4.6),

- wherein at least one of the responses is recognized by the logic layer (p1-50 especially "has understood that 'it' refers to ..." §4.5 and "keep a list of all entities mentioned in the discourse" §4.5 and "allow elliptical utterances ... to be understood" §4.6),
- wherein the chosen response is the response to be used in the response layer (p1-50 especially "echoes back the user's question, with the pronoun replaced by what the system understands to be its meaning" §4.5 and §4.6; *It is clear that the chosen response is used in the response layer's response to the user request*).

Motivation:

Chikirivao and **Androutsopoulos** are from the same field of endeavor, autonomously processing requests for information management and retrieval. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of **Chikirivao** by identifying a signifier in a layer such as the response or logic layer to determine whether information is needed as taught by **Androutsopoulos** for the benefit of resolving pronoun anaphora and preventing user annoyance (**Androutsopoulos** §4.5-§4.6).

Independent Claim 35:

Chikirivao teaches:

- An interface configured to receive information from the administrator (pages 1-7 especially "querying the administrator ... create a customized rule based upon a pre-existing customizable rule template saved in the rule repository" ¶38-39 and "querying the administrator ... create a customized rule based upon a pre-existing customizable rule template saved in the rule repository" ¶38-39 and "entering and saving of data into a template" ¶43);
- A template accessible to the administrator, wherein the template includes at least one field to elicit information from the administrator (pages 1-7 especially "querying the administrator ... create a customized rule based upon a pre-existing customizable rule template saved in the rule repository" ¶38-

39 and "querying the administrator ... create a customized rule based upon a pre-existing customizable rule template saved in the rule repository" ¶38-39 and "entering and saving of data into a template" ¶43);

- An engine configured to:
    - Make the information accessible to a rules-based program that provides the at least one response in reply to the inputs from the user (pages 1-7 especially "querying the administrator ... create a customized rule based upon a pre-existing customizable rule template saved in the rule repository ... either testing the rule or saving the rule" ¶38-39 and "rules created by an administrator are preferably saved in the rule repository" ¶29);
    - Retrieve the rules (pages 1-7 especially "system obtains the rule" ¶38-39);
    - For each rule retrieved, determine whether the rule needs information (pages 1-7 especially "administrator may need to specify more or less information" ¶40 and "rules which are generated based upon ... information ... based upon parameters specified" ¶31 and "information and/or sub-rules needed to make such determinations" ¶32 and "rules may be designed with any level of interactivity and/or user knowledge required and may include and utilize data and other information" ¶33 and "extracts from the provided information those parameters required by the rule(s)" ¶44-48);
    - Retrieve the information from a corresponding field in the template and insert the information into the rule if the rule needs information (pages 1-7 especially "extracts from the provided information those parameters required by the rule(s)" ¶44-48 and "administrator may need to specify more or less information" ¶40 and "routing of information based upon the input template" ¶59);
    - Determine if either a response layer or a logic layer needs information (pages 1-7 especially "rule which requires the user to provide inputs as to specific needs" ¶35 and "administrator may need to specify more or less information" ¶40 and "rules which are generated based upon ... information ... based upon parameters specified" ¶31 and "information and/or sub-rules needed to make such determinations" ¶32 and "rules may be designed with any level of interactivity and/or user knowledge required and may include and utilize data and other information" ¶33 and "extracts from the provided information those parameters required by the rule(s)" ¶44-48); and

- retrieving information indicated as needed from a corresponding field in the template and inserting the information into the response layer or logic layer, respectively (pages 1-7 especially "templates and other features that enable a user to expeditiously enter the necessary information required" ¶43 and "extracts from the provided information those parameters required by the rule(s)" ¶44-48 and "information is received from the field" ¶50 and "routing of information based upon the input template" ¶59 and "administrator may need to specify more or less information" ¶40);

Chikirivao fails to teach:

- Wherein the step of determining whether a layer needs information, includes identifying a signifier in the layer,
  - wherein the signifier is an identifier configured to call for information such that the call for information invokes a process to select in the information from a corresponding field in the template so that the information will be linked to the rule, and
  - wherein the logic layer is configured to choose between various responses provided by the user,
  - wherein at least one of the responses is recognized by the logic layer,
  - wherein the chosen response is the response to be used in the response layer.

Androutsopoulos teaches:

- Wherein the step of determining whether a layer needs information includes the step of identifying a signifier in the layer, wherein the signifier is an identifier configured to call for information such that the call for information invokes a process to select in the information from a corresponding field in the template so that the information will be linked to the rule (p1-50 especially "form-based interface" §3 and "linguistic problems" §4 and "Pronouns ... anaphora" §4.5 and "elliptical sentences" §4.6 and "database tuples may contain encoded information" §5.5; *It would have been clear to the person of ordinary skill in the art at the time the invention was made that the reference teaches that there are indicators in the user input which indicate when more information is needed in order to process the request, and that the encoded information would be treated as embedded instruction code signaling that the full information would need to be retrieved for the response layer*), and

- wherein the logic layer is configured to choose between various responses provided by the user (p1-50 especially "keep a list of all entities mentioned in the discourse. When a pronoun is encountered, the system examines the list ... satisfies grammatic and semantic constraints" §4.5 and "contextual substitution" §4.6),
- wherein at least one of the responses is recognized by the logic layer (p1-50 especially "has understood that 'it' refers to ..." §4.5 and "keep a list of all entities mentioned in the discourse" §4.5 and "allow elliptical utterances ... to be understood" §4.6),
- wherein the chosen response is the response to be used in the response layer (p1-50 especially "echoes back the user's question, with the pronoun replaced by what the system understands to be its meaning" §4.5 and §4.6; *It is clear that the chosen response is used in the response layer's response to the user request*).

Motivation:

Chikirivao and **Androutsopoulos** are from the same field of endeavor, autonomously processing requests for information management and retrieval. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of **Chikirivao** by identifying a signifier in a layer such as the response or logic layer to determine whether information is needed as taught by **Androutsopoulos** for the benefit of resolving pronoun anaphora and preventing user annoyance (**Androutsopoulos** §4.5-§4.6).

Independent Claim 41:

Chikirivao teaches:

- Providing a template to the administrator, wherein the template includes at least one field to elicit information from the administrator (pages 1-7 especially "querying the administrator ... create a customized rule based upon a pre-existing customizable rule template saved in the rule repository" ¶38-39),
- Receiving information from the administrator into the template (pages 1-7 especially "querying the administrator ... create a customized rule based upon a pre-existing customizable rule template saved in the rule repository" ¶38-39 and "entering and saving of data into a template" ¶43), and

- Making the information accessible to a rules-based program for use in providing the at least one response in reply to a request from a user (pages 1-7 especially "querying the administrator ... create a customized rule based upon a pre-existing customizable rule template saved in the rule repository ... either testing the rule or saving the rule" ¶38-39 and "rules created by an administrator are preferably saved in the rule repository" ¶29), wherein the step of making the information accessible to the rules-based program saves the information as part of the template (pages 1-7 especially "querying the administrator ... create a customized rule based upon a pre-existing customizable rule template saved in the rule repository" ¶38-39 and "entering and saving of data into a template" ¶43) into rules (pages 1-7 especially "querying the administrator ... create a customized rule based upon a pre-existing customizable rule template saved in the rule repository ... either testing the rule or saving the rule" ¶38-39 and "rules created by an administrator are preferably saved in the rule repository" ¶29),
    - Retrieving rules (pages 1-7 especially "system obtains the rule" ¶38-39),
    - For each rule retrieved, determining whether the rule needs information (pages 1-7 especially "administrator may need to specify more or less information" ¶40 and "rules which are generated based upon ... information ... based upon parameters specified" ¶31 and "information and/or sub-rules needed to make such determinations" ¶32 and "rules may be designed with any level of interactivity and/or user knowledge required and may include and utilize data and other information" ¶33 and "extracts from the provided information those parameters required by the rule(s)" ¶44-48),
    - If the rule needs information, retrieving the information from a corresponding field in the template and inserting the information into the rule (pages 1-7 especially "extracts from the provided information those parameters required by the rule(s)" ¶44-48 and "administrator may need to specify more or less information" ¶40 and "routing of information based upon the input template" ¶59)

Chikirivao fails to teach:

- Determining whether an input recognizer needs information by identifying the presence of a signifier, wherein the signifier is an identifier configured to call for information such that the call for information

invokes an editor to select the information from a corresponding field in the template so that the information will be linked to the rule; and

- If the input recognizer needs information, retrieving the information from a corresponding field in the template and inserting the information into the input recognizer.

Androutsopoulos teaches:

- Wherein the step of determining whether an input recognizer needs information includes the step of identifying a signifier in the layer, wherein the signifier is an identifier configured to call for information such that the call for information invokes a process to select in the information from a corresponding field in the template so that the information will be linked to the rule (p1-50 especially "form-based interface" §3 and "linguistic problems" §4 and "Pronouns ... anaphora" §4.5 and "elliptical sentences" §4.6; *It would have been clear to the person of ordinary skill in the art at the time the invention was made that the reference teaches that there are indicators in the user input which indicate when more information is needed in order to process the request*), and
  - If the input recognizer needs information, retrieving the information from a corresponding field in the template and inserting the information into the input recognizer (p1-50 especially "keep a list of all entities mentioned in the discourse. When a pronoun is encountered, the system examines the list ... satisfies grammatic and semantic constraints" §4.5 and "contextual substitution" §4.6 and "understood" §4.5-§4.6 and "echoes back the user's question, with the pronoun replaced by what the system understands to be its meaning" §4.5 and §4.6)

Motivation:

Chikirivao and **Androutsopoulos** are from the same field of endeavor, autonomously processing requests for information management and retrieval. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of **Chikirivao** by identifying a signifier in a layer such as the response or logic layer to determine whether information is needed as taught by **Androutsopoulos** for the benefit of resolving pronoun anaphora and preventing user annoyance (**Androutsopoulos** §4.5-§4.6).

Claim 5:

Chikirivao fails to teach:

- Wherein the step of determining whether the rule needs information includes the steps of:
    - Determining whether a response layer needs information, and
    - If the response layer needs information, retrieving the information from a corresponding field in the template and inserting the information into the response layer.

Androutsopoulos teaches:

- Wherein the step of determining whether the rule needs information includes the steps of:
    - Determining whether a response layer needs information ("form-based interface" §3 and "linguistic problems" §4 and "Pronouns ... anaphora" §4.5 and "elliptical sentences" §4.6 and "database tuples may contain encoded information" §5.5; *It would have been clear to the person of ordinary skill in the art at the time the invention was made that the reference teaches that there are indicators in the user input which indicate when more information is needed in order to process the request, and that the encoded information would be treated as embedded instruction code signaling that the full information would need to be retrieved for the response layer*), and
    - If the response layer needs information, retrieving the information from a corresponding field in the template and inserting the information into the response layer (p1-50 especially "keep a list of all entities mentioned in the discourse. When a pronoun is encountered, the system examines the list ... satisfies grammatic and semantic constraints" §4.5 and "contextual substitution" §4.6 and "echoes back the user's question, with the pronoun replaced by what the system understands to be its meaning" §4.5 and §4.6; *It would have been clear to the person of ordinary skill in the art at the time the invention was made that the encoded information would be treated as embedded instruction code signaling that the full information would need to be retrieved for the response layer and that the chosen response is used in the response layer's response to the user request*).

Motivation:

Chikirivao and **Androutsopoulos** are from the same field of endeavor, autonomously processing requests for information management and retrieval. It would have been obvious to one of ordinary skill in

the art at the time of the invention to modify the teachings of **Chikirivao** by retrieving information for the response layer if needed as taught by **Androutsopoulos** for the benefit of resolving pronoun anaphora and preventing user annoyance (**Androutsopoulos** §4.5-§4.6).

Claim 6:

Chikirivao fails to teach:

- Wherein the step of determining whether the rule needs information includes the steps of:
  - Determining whether a logic layer needs information, wherein the logic layer is configured to choose between various responses provided by the user, wherein at least one of the responses is recognized by the logic layer, wherein the chosen response is the response to be used in the response layer, and
  - If the logic layer needs information, retrieving the information from a corresponding field in the template and inserting the information into the logic layer.

Androutsopoulos teaches:

- Wherein the step of determining whether the rule needs information includes the steps of:
  - Determining whether a logic layer needs information (p1-50 especially "form-based interface" §3 and "linguistic problems" §4 and "Pronouns ... anaphora" §4.5 and "elliptical sentences" §4.6; *It would have been clear to the person of ordinary skill in the art at the time the invention was made that the reference teaches that there are indicators in the user input which indicate when more information is needed in order to process the request, and that the encoded information would be treated as embedded instruction code signaling that the full information would need to be retrieved for the response layer*),
    - wherein the logic layer is configured to choose between various responses provided by the user (p1-50 especially "keep a list of all entities mentioned in the discourse. When a pronoun is encountered, the system examines the list ... satisfies grammatic and semantic constraints" §4.5 and "contextual substitution" §4.6),

- wherein at least one of the responses is recognized by the logic layer (p1-50 especially "has understood that 'it' refers to ..." §4.5 and "keep a list of all entities mentioned in the discourse" §4.5 and "allow elliptical utterances ... to be understood" §4.6),
- wherein the chosen response is the response to be used in the response layer (p1-50 especially "echoes back the user's question, with the pronoun replaced by what the system understands to be its meaning" §4.5 and §4.6; *It is clear that the chosen response is used in the response layer's response to the user request*), and

o If the logic layer needs information, retrieving the information from a corresponding field in the template and inserting the information into the logic layer (p1-50 especially "form-based interface" §3 and "linguistic problems" §4 and "Pronouns ... anaphora" §4.5 and "elliptical sentences" §4.6 and "has understood that 'it' refers to ..." §4.5 and "keep a list of all entities mentioned in the discourse" §4.5 and "allow elliptical utterances ... to be understood" §4.6).

Motivation:

Chikirivao and **Androutsopoulos** are from the same field of endeavor, autonomously processing requests for information management and retrieval. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of **Chikirivao** by retrieving information for the logic layer if needed as taught by **Androutsopoulos** for the benefit of resolving pronoun anaphora and preventing user annoyance (**Androutsopoulos** §4.5-§4.6).

Claims 9 & 14:

Chikirivao fails to teach:

- Wherein the signifier is an instruction embedded in a text string.

Androutsopoulos teaches:

- Wherein the signifier is an instruction embedded in a text string (p1-50 especially "query above instructs the database system" §3).

Motivation:

Chikirivao and **Androutsopoulos** are from the same field of endeavor, autonomously processing requests for information management and retrieval. It would have been obvious to one of ordinary skill in

the art at the time of the invention to modify the teachings of **Chikirivao** by having an instruction embedding in a text string as taught by **Androutsopoulos** for the benefit of appropriately responding to the user request (**Androutsopoulos** §3).

Claims 10 & 15:

Chikirivao fails to teach:

- Wherein the signifier is a code.

Androutsopoulos teaches:

- Wherein the signifier is a code (p1-50 especially "encoded information ... codes" §5.5).

Motivation:

Chikirivao and **Androutsopoulos** are from the same field of endeavor, autonomously processing requests for information management and retrieval. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of **Chikirivao** by having a code as a signifier as taught by **Androutsopoulos** for the benefit of generating a suitable response (**Androutsopoulos** §5.5).

Claim 23:

Chikirivao teaches:

- Wherein the step of making the information accessible to the rules-based program is accomplished by receiving a manual command from a user (pages 1-7 especially "access to a rule may be specified manually or automatically" ¶43).

Claim 24:

Chikirivao teaches:

- Wherein the step of making the information accessible to the rules-based program is accomplished automatically upon the occurrence of a predefined event (pages 1-7 especially "access to a rule may be specified manually or automatically" ¶43).

Claim 27:

Chikirivao teaches:

- Wherein the predefined event is activation of a save function by the administrator (pages 1-7 especially "access to a rule may be specified manually or automatically ... rule may be activated upon the entering and saving of data into a template" ¶43).

Claims 28 and 40:

Chikirivao teaches:

- Further including the step of enabling the administrator to edit the information (pages 1-7 especially "querying the administrator ... modify an existing rule ... create a customized rule based upon a pre-existing customizable rule template saved in the rule repository ... allow the user to modify/customize the rule" ¶38-39 and "enables such administrators to ... edit ... the rules" ¶29).

Claim 29:

Chikirivao teaches:

- Wherein the step of enabling the administrator to edit the information includes the steps of:
    - Retrieving the information (pages 1-7 especially "obtains the rule and provides those interfaces necessary to allow the user to modify/customize the rule" ¶38-39),
    - Posting the information in at least one appropriate field in the template (pages 1-7 especially "based upon a pre-existing customizable rule template ... obtains the rule and provides those interfaces necessary to allow the user to modify/customize the rule" ¶38-39 and "templates and other features that enable a user to expeditiously enter the necessary information required for a given task" ¶43),
    - Receiving edited information from the administrator into the template (pages 1-7 especially "based upon a pre-existing customizable rule template ... obtains the rule and provides those interfaces necessary to allow the user to modify/customize the rule" ¶38-39 and "templates and other features that enable a user to expeditiously enter the necessary information required for a given task" ¶43), and

- Making the edited information accessible to the rules-based program for use in providing the at least one response in reply to a request from the user (pages 1-7 especially "querying the administrator ... create a customized rule based upon a pre-existing customizable rule template saved in the rule repository ... either testing the rule or saving the rule" ¶38-39 and "rules created by an administrator are preferably saved in the rule repository" ¶29).

Claim 30:

Chikirivao teaches wherein:

- The step of making the information accessible to the rules-based program saves the information as part of the template (pages 1-7 especially "access to a rule may be specified manually or automatically ... rule may be activated upon the entering and saving of data into a template" ¶43), and
- The step of retrieving the information includes the step of restoring the information to the at least one field (pages 1-7 especially "based upon a pre-existing customizable rule template ... obtains the rule and provides those interfaces necessary to allow the user to modify/customize the rule" ¶38-39).

Claim 31:

Chikirivao teaches wherein:

- The step of making the information accessible to the rules-based program saves the information as structured data (pages 1-7 especially "querying the administrator ... create a customized rule based upon a pre-existing customizable rule template saved in the rule repository ... either testing the rule or saving the rule" ¶38-39 and "rules created by an administrator are preferably saved in the rule repository" ¶29; *The rule repository is clearly structured data storage*).

Chikirivao fails to teach wherein:

- The step of retrieving the information includes the steps of, for at least one of the at least one field in the template:
  - Retrieving instructions indicating where the information is stored, and
  - Executing the instructions to retrieve the information.

Androutsopoulos teaches wherein:

- The step of making the information accessible to the rules-based program saves the information as structured data (p1-50 especially "database" §1), and
- The step of retrieving the information includes the steps of, for at least one of the at least one field in the template:
    - Retrieving instructions indicating where the information is stored (p1-50; *The person of ordinary skill in the art at the time the invention was made would have understood that information is retrieved from a database by executing instructions indicating where the information is stored*)
    - Executing the instructions to retrieve the information (p1-50; *The person of ordinary skill in the art at the time the invention was made would have understood that information is retrieved from a database by executing instructions indicating where the information is stored*).

Motivation:

Chikirivao and **Androutsopoulos** are from the same field of endeavor, autonomously processing requests for information management and retrieval. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of **Chikirivao** by retrieving and executing instructions for the retrieval of the information as taught by **Androutsopoulos** for the benefit of responding to user requests (**Androutsopoulos** §3 & §5.5).

Claim 32:

Chikirivao teaches wherein:

- The step of making the information accessible to the rules-based program saves the information into rules (pages 1-7 especially "querying the administrator ... create a customized rule based upon a pre-existing customizable rule template saved in the rule repository ... either testing the rule or saving the rule" ¶38-39 and "rules created by an administrator are preferably saved in the rule repository" ¶29).

Chikirivao fails to teach wherein:

- The step of retrieving the information includes the steps of, for at least one of the at least one field in the template:
    - Retrieving instructions indicating where the information is stored, and
    - Executing the instructions to retrieve the information.

Androutsopoulos teaches wherein:

- The step of making the information accessible to the rules-based program saves the information as structured data (p1-50 especially "database" §1), and
- The step of retrieving the information includes the steps of, for at least one of the at least one field in the template:
    - Retrieving instructions indicating where the information is stored (p1-50; *The person of ordinary skill in the art at the time the invention was made would have understood that information is retrieved from a database by executing instructions indicating where the information is stored*)
    - Executing the instructions to retrieve the information (p1-50; *The person of ordinary skill in the art at the time the invention was made would have understood that information is retrieved from a database by executing instructions indicating where the information is stored*).

Motivation:

Chikirivao and **Androutsopoulos** are from the same field of endeavor, autonomously processing requests for information management and retrieval. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of **Chikirivao** by retrieving and executing instructions for the retrieval of the information as taught by **Androutsopoulos** for the benefit of responding to user requests (**Androutsopoulos** §3 & §5.5).

Claim 33:

Chikirivao teaches wherein:

- The step of making the information accessible to the rules-based program saves the information into rules (pages 1-7 especially "querying the administrator ... create a customized rule based upon a pre-existing customizable rule template saved in the rule repository ... either testing the rule or saving the rule" ¶38-39 and "rules created by an administrator are preferably saved in the rule repository" ¶29).

Chikirivao fails to teach wherein:

- The step of retrieving the information includes the steps of, for each rule used:
    - Determining whether the rule includes a signifier, and

- If a signifier is included, executing instructions from the signifier to retrieve the information associated with the rule.

Androutsopoulos teaches wherein:

- The step of retrieving the information includes the steps of, for each rule used:
  - Determining whether the rule includes a signifier (p1-50 especially "heuristic rule" §4.3 and "contextual substitution rules" §4.6 and "rule" throughout), and
  - If a signifier is included, executing instructions from the signifier to retrieve the information associated with the rule (p1-50 especially "allow elliptical utterances" §4.6 and "allow the system to answer the question" §5.1).

Motivation:

Chikirivao and **Androutsopoulos** are from the same field of endeavor, autonomously processing requests for information management and retrieval. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of **Chikirivao** by identifying a signifier in a layer such as the response or logic layer to determine whether information is needed as taught by **Androutsopoulos** for the benefit of preventing user annoyance and allowing the system to answer the user's questions (**Androutsopoulos** §4.6 & §5.1).

Claim 34:

Chikirivao teaches wherein:

- The step of making the information accessible to the rules-based program saves the information into rules (pages 1-7 especially "querying the administrator ... create a customized rule based upon a pre-existing customizable rule template saved in the rule repository ... either testing the rule or saving the rule" ¶38-39 and "rules created by an administrator are preferably saved in the rule repository" ¶29).

Chikirivao fails to teach wherein:

- The step of retrieving the information includes the steps of, for each rule used:
  - Determining whether the rule includes a signifier, and
  - If a signifier is included, retrieving the information tagged in the rule.

Androutsopoulos teaches wherein:

- The step of retrieving the information includes the steps of, for each rule used:
    - Determining whether the rule includes a signifier (p1-50 especially "heuristic rule" §4.3 and "contextual substitution rules" §4.6 and "rule" throughout), and
    - If a signifier is included, executing instructions from the signifier to retrieve the information associated with the rule (p1-50 especially "allow elliptical utterances" §4.6 and "allow the system to answer the question" §5.1).

Motivation:

Chikirivao and **Androutsopoulos** are from the same field of endeavor, autonomously processing requests for information management and retrieval. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of **Chikirivao** by identifying a signifier in a layer such as the response or logic layer to determine whether information is needed as taught by **Androutsopoulos** for the benefit of preventing user annoyance and allowing the system to answer the user's questions (**Androutsopoulos** §4.6 & §5.1).

Claim Rejections - 35 USC § 103

Claims 8 & 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chikirivao** (USPAP 2003/0163783) and **Androutsopoulos** ("Natural Language Interfaces to Databases – An Introduction") in view of **Weiskamp** ("Artificial Intelligence Programming with Turbo Prolog").

Claims 8 & 13:

Chikirivao fails to teach:

- Wherein the signifier is a tag in a text string.

Weiskamp teaches:

- Wherein the signifier is a tag in a text string (p129-140 especially "sentence is a question because it ends with a '?'. Therefore, if you wanted your database program to determine if the user was asking a question, you could have it scan the input sentence for a '?'" p135).

Motivation:

Chikirivao and **Weiskamp** are from the same field of endeavor, autonomously processing requests for information management and retrieval. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of **Chikirivao** by having a tag in a text string as a signifier as taught by **Ferrel** for the benefit of determining if the user is asking a question (**Weiskamp** p135).

Claim Rejections - 35 USC § 103

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Chikirivao** (USPAP 2003/0163783) and **Androutsopoulos** ("Natural Language Interfaces to Databases – An Introduction") in view of **Jammes** (USPN 6,484,149).

Claim 22:

The combination of **Chikirivao** and **Androutsopoulos** fails to teach:

- Wherein the step of retrieving rules retrieves all of the rules in a template information script.

Jammes teaches:

- Wherein the step of retrieving rules retrieves all of the rules in a template information script (C1-56 especially "based on a template ... scripts to extract stored ... patterns ... against customization rules" C43:40-65).

Motivation:

Jammes and the combination of **Chikirivao** and **Androutsopoulos** are from the same field of endeavor, software development. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined teachings of **Chikirivao** and **Androutsopoulos** by retrieving all of the rules in a template information script as taught by **Jammes** for the benefit of making the on-line experience more convenient and expedient as well as more pleasant (**Jammes** C4:10-35).

Claim Rejections - 35 USC § 103

Claims 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chikirivao** (USPAP 2003/0163783) and **Androutsopoulos** ("Natural Language Interfaces to Databases – An Introduction") in view of **Habraken** ("Microsoft Office XP 8-in-1" – Part III: Word – Chapter 2: Working with Documents).

Claim 25:

The combination of **Chikirivao** and **Androutsopoulos** fails to teach:

- Wherein the predefined event is closing of the template.

Habraken teaches:

- Wherein the predefined event is closing of the template (pages 4-16 especially "Before closing ... asks whether you want to save these changes before closing" page 15).

Motivation:

Habraken and the combination of **Chikirivao** and **Androutsopoulos** are from the same field of endeavor, software. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined teachings of **Chikirivao** and **Androutsopoulos** by saving information to be available occurs when closing the template being edited as taught by **Habraken** for the benefit of not wanting to lose any recent changes (**Habraken** page 15) since you don't want to lose your valuable documents as you create them (**Habraken** page 13).

Claim 26:

The combination of **Chikirivao** and **Androutsopoulos** fails to teach:

- Wherein the predefined event is passage of a predetermined amount of time.

Habraken teaches:

- Wherein the predefined event is passage of a predetermined amount of time (pages 4-16 especially "AutoSave feature ... AutoRecoverInfo Every ... set the time interval between autosaves" page 13).

Motivation:

Habraken and the combination of **Chikirivao** and **Androutsopoulos** are from the same field of endeavor, software. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined teachings of **Chikirivao** and **Androutsopoulos** by saving information occurs after a predetermined amount of time as taught by **Habraken** for the benefit of not wanting to lose any recent changes (**Habraken** page 15) since you don't want to lose your valuable documents as you

create them, so if you are really absent-minded about periodically saving your work, use the AutoSave feature (**Habraken** page 13).

Conclusion

The prior art made of record and not relied upon is considered pertinent to Applicants' disclosure.

- Bhaumik ("Integrating hypermedia functionality into Database Applications")
- Thompson ("Using a menu-based Natural language interface to ask map- and graph-valued database queries")

Claims 1, 5-6, 8-10, 13-15, 22-35, & 40-41 are rejected.

Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin Buss whose telephone number is 571-272-5831. The examiner can normally be reached on M-F 9AM-5PM.

As detailed in MPEP 502.03, communications via Internet e-mail are at the discretion of the applicant. Without a written authorization by applicant in place, the USPTO will not respond via Internet e-mail to any Internet correspondence which contains information subject to the confidentiality requirement as set forth in 35 U.S.C. 122. A paper copy of such correspondence will be placed in the appropriate patent application. The following is a sample authorization form which may be used by applicant:

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Vincent can be reached on 571-272-3080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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4/30/07
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